

TIMELINEZ

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ISSUE 02

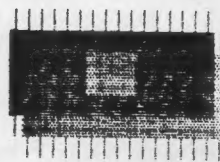
FEBRUARY 1990

\$1.50

CONTENTS:

VIEW FROM RANTOP
THE WIDJUP Co. REVISITED
JACK DUNN & ZEBRAS

VIEW FROM RANTOP



Many members have asked the big question of "how do other types of clubs differ from the average computer club". Well, I thought I could take this opportunity and answer such a simple question.

As many of you already know, prior to my involvement to the world of TIMEX and Sinclair (pre 1981), I was heavily engaged in the wonders of astronomy. While vacationing in Florida last December, I had the opportunity to visit my old club (The Saint Petersburg Astronomy Club) and participate in an "average" club observing session called a "Star Party". The following event took place near Brooksville on the night of the 30th thru the morning of the 31st, 1989.

The trip to Hickory Hill began around 5:30 pm after waiting for Dan Bricker (my astronomy buddy) to pick me up. Upon his arrival, I was disappointed to find that his old VW bus was not being used as our transport to the Hill as was the case in years past. Instead, Dan arrived in a plain, ordinary looking white van.

After saying hodie doodie, we were on our way. At this point I must tell you that since joining the U.S. Air Force and moving to CA in 1987, I have not seen or heard from Dan in almost three years. This also includes contact with the club as I had then resigned as SPAC Vice Presidency and dropped out of club activities.

So there I was, being driven up to a great observing site with a great old friend. Because I was only here on vacation, and hadn't brought any type of telescope (just imagine flying with one for a 3 week vacation) good ol' Dan saw to my needs and brought an extra one along. While enjoying the ride up we couldn't help but reminisce about the past, and of course Dan told me all the latest club news for my benefit.

Upon our arrival, we met up with another familiar face, former SPAC'er Ed Wright (who was visiting from Newport News, VA) who had driven up a new member, Joan Yancar. Before we started our all-night observing session, we decided to indulge ourselves with some delicious barbecue food in Brooksville. Again we told tales of famous times we had experienced in the past. After Ed and I had stuffed our faces with piled-high plates from the salad bar along with our main dish and giving the waitress a difficult time,

we rolled back out to Dan's van to join the others at Hickory Hill.

Once there, Dan introduced Joan and I to the 35 or so who were observing, while Ed bumped into some old friends in a tent-camper and proceeded to bury themselves in several bottles of homemade wine. Please believe me when I say that Ed was in high spirits when he emerged some time later. Joan and Dan were deep in conversation...actually Dan was in his "teaching mode" with Joan and several other late arrivals.

As for myself, I floated around observing through the many telescopes that were monstrous compared to the scopes from my days as a member. I had a personal viewing through a 25" (mirror) diameter, a 20", a 17.5", an award-winning 14.5" equatorial ATM design, and two different 10's.

I was extremely impressed with the 20 inch telescope. The design was inspired and built by Tom Clark and John Reeves of the Local Group of Sarasota-Bradenton. Costing under 4 G's, this scope did an exquisite job while viewing M46. The planetary nebula within the open cluster of stars stuck out like a sore thumb. A two inch 8mm Nagler eye-piece was used to view this. It was most breath taking.

After this great tour, I borrowed Dan's Astroscan 2001, all of his eyepieces except one, and climbed up the observing tower to perform my own personal study of the stars. I spent most of my time reviewing the wonders of the night sky that I had missed for years. Then I turned my attention to bright Jupiter. The planet was high overhead very near the zenith (the spot directly over head). I really had to position myself at an awkward angle in order to get a good view.

At first glance there appeared to be shadows on Jupiter. However, on closer scrutiny the small, almost black spots proved to actually be turbulence within the northern equatorial band. This was later confirmed by Dan's observation through his 10 inch Newtonian.

However, before Dan could get a real good view of Jupiter, he was having a little trouble with his telescope....Nothing serious, just things like missing eyepieces, excessive wobble, B.B. and Dec. motors running wild, and for some reason, the end-cap to Dan's scope kept finding itself back on top, along with eyepiece covers. Dan's problems were finally alleviated after 10 to 15 minutes of this discomfort. After being verbally chastised, Ed and I stopped jumping around Dan's scope and causing all the other mischief.

Unfortunately, 30 minutes later, clouds rolled in ending the observing. We quickly escaped from the cool night air for some hot cocoa in the clubhouse. Here ends our night.

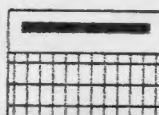
Support For
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ZX81 - spectran - 01

and

TIMEX sinclair

1000 - 1500 - 2060



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Z 88

computers

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1000, 1500, 2068

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FRONT

PAGE

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COMPUTER AND
THIS PROGRAM.

DESK-TOP PUBLISHING
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=====

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Back issues of **TIME-LINEZ**, 7/83 thru 12/87
Contact Bill Miller at:

SinLink
6675 Clifford Drive
Cupertino, CA 95014

Issues 1/88 - present,
contact your editor at
American Micro.

The PDSE Library is
now available to all;
covering T/S1000-1500,
T/S 2068, Spectrum and
the QL.
Contact **American Micro**
for further details.

THE QUDJUP Co. REVISITED

Enclosed is a sheet which nearly completes the information needed to actually make and use expansion slots. This shows how economical clone parts fit together to make it possible for even tyros to have this power.

The only information still lacking is the details for making the QUDJUP primary adaptor and a description of how the TS2040 has its address completed so it doesn't respond to foreign I/O ports.

I have put on the market a new CAD program called CAD#3.E1 which works with LKDOS and EPSON compatible printers. It will be reviewed shortly, and has been beta tested with favorable results. This will be available as SHARE-WARE. The primary adaptor mentioned above is defined by files used by CAD#3.E1. These files are PUBLIC DOMAIN as well as any photo masters and independently produced adaptors. I will write another article filling in the missing information for the next issue.

In case you didn't notice, this is completely compatible with the bank switching system already described. In fact, it preceded it. In this way, one system doesn't kill others - a problem with most other available TS2068 expansions. LKDOS can remount to an expansion slot without losing any of its powers while another system like CP/M can temporarily take its place. Unusual bank switching systems like LKDOS cannot always be made compatible, but new versions can usually be made if they merit survival. LKDOS requires another logic gate to break into EE signal line, but even without that it works fine as long as you don't bank switch chunks 0 or 1. The present version of LKDOS cannot be turned off without this additional gate. A simple adaptor provides this gate and an edge compatible with the back-plane.

Similar adaptations work for other operating systems. Bank resident expansions simply require conversion to another bank so that disk space becomes available for "canned" user programs again. The dearth of user plug-and-go cartridges, in my opinion, has more than anything else led to the decline of the TS2068. I know there are a lot of programmers out there eager to show off their application programs. Now, with the expansion of the TS2068, the sky is the limit.

By the way, it might seem desirable to get one of these programmers to write a new article about cartridges. CAD#3.E1 makes producing them a snap!

THE QUDJUP Co.
1120 Merrifield S.E.
Grand Rapids, MI 49507
ATTN: William J. Pedersen

ZEBRA DISC REBORN BY JACK DOBANY

INTRODUCTION

The ZEBRA disc system for the 2068 has been hard to get for some time. I now have a limited number of ZEBRA disc systems and components available. Please see the attached price list. NOTE: prices are subject to change.

GUARANTEE

All hardware I sell is guaranteed for 60 days, thus: replacement or full refund if you are dissatisfied. After 60 days, I will be happy to perform repairs or replacement at minimal cost.

TRADE-IN POLICY

If you already have a ZEBRA system, you are welcome (and encouraged) to trade in your old components, working or not. The value of your old components depends on their condition.

For example, you can trade in a working 16K controller for a guaranteed 64K controller with CP/M, and pay only \$20.00 + shipping. The value of any non-working component is \$10.00.

BUYING A WHOLE SYSTEM

Buying a whole system is quite simple: you order the components you want, and I will assemble them into a working system for you at no extra charge.

The MINIMUM components you need are these:

1. A 2068 computer (you probably have one)
2. The ZEBRA interface (plugs on rear of 2068)
3. Power Supply (for Controller and Drives)
4. A Controller (16K or 64K)
5. One or more Disc Drives

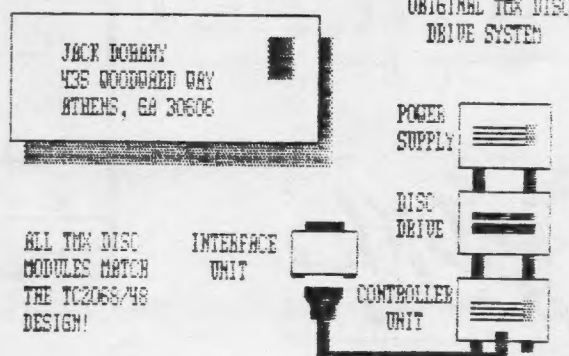
OPTIONAL components:

6. A system cabinet type A or B.
7. Spectrum emulation for 2068.
8. A printer interface (you may have one)
9. A LINGER board

Each of the above components is described in detail on next column.

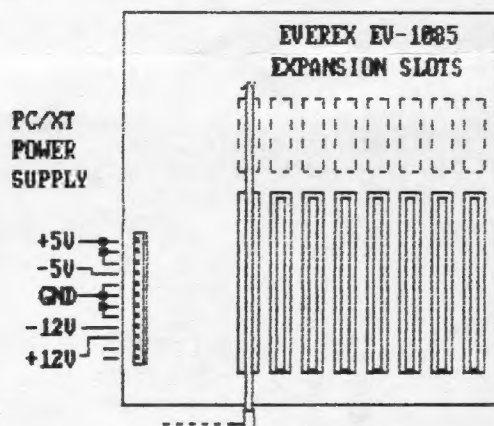
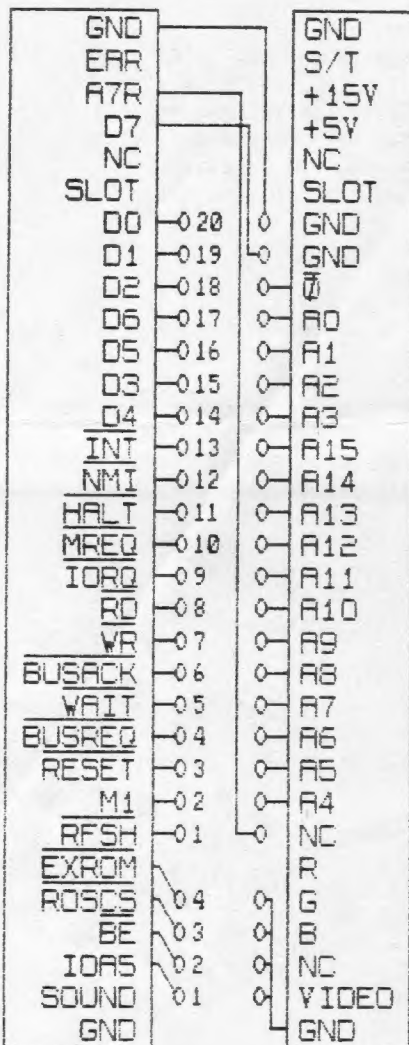
NOTE: if you do NOT order a cabinet, then your components will be provided in "silver boxes" when and as possible, at no extra charge.

NOTE: appropriate documentation will be provided with whatever you purchase at no charge.



TS2068 BACK-PLANE EXPANSION SYSTEM STANDARD

IDC TAKE-OFFS



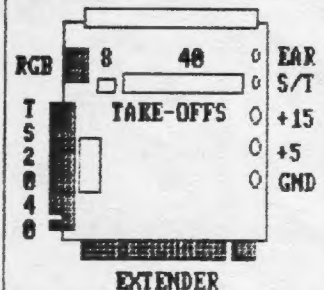
TS2068 BUS TO EVEREX EV-1085

2068	IBM	I/O EDGE	IBM	2068
[GND]	[GND]	B1	A1	CH CK
RESET	RST DU	B2	A2	D7
[NC]	[+5V]	B3	A3	D6
#	IRQ2	B4	A4	D5
[NC]	[-5V]	B5	A5	D4
BUSREQ	DRQ2	B6	A6	D3
[NC]	[-12V]	B7	A7	D2
M1	CD SEL	B8	A8	D1
[NC]	[+12V]	B9	A9	D0
[GND]	[GND]	B10	A10	CH RBY
MREQ	MEMW	B11	A11	AEN
IORQ	MEMR	B12	A12	A19
WR	IOW	B13	A13	A18
RD	IOR	B14	A14	A17
ROSCS	DACK3	B15	A15	A16
HALT	DRQ3	B16	A16	A15
A7R	DACK1	B17	A17	A14
BE	DRQ1	B18	A18	A13
RFSH	DACK0	B19	A19	A12
0	CLOCK	B20	A20	A11
#	IRQ6	B21	A21	A10
INT	IRQ7	B22	A22	A9
#	IRQ5	B23	A23	A8
#	IRQ4	B24	A24	A7
#	IRQ3	B25	A25	A6
EXROM	DACK2	B26	A26	A5
IOAS	I/C	B27	A27	A4
NC	ALE	B28	A28	A3
[NC]	[+5V]	B29	A29	A2
NC	OSC	B30	A30	A1
[GND]	[GND]	B31	A31	A0

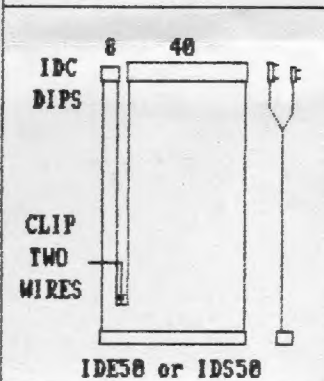
[] = EVEREX WIRED CONNECTION.

PRIMARY ADAPTER

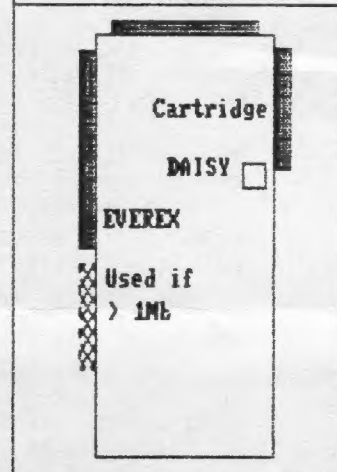
TS2068 REAR CONNECTOR



CABLE ASSEMBLY



BUS DRIVER CARD



NOTES:

1. Card has same general layout for all applications.
2. Table shows connections used when IBM compatibility is not implemented.
3. New Cartridge slot must be used if bank switching is implemented. (BE conflict)
4. DAISY is for advanced WIDJUP autoconfiguring use.
5. User cards can have two edges, one for each system.

COMPONENT DESCRIPTIONS

1: THE 2068

If you don't have a 2068, I can probably provide a good used one. And if I can't, I can probably point you to someone who can. I can install Spectrum emulation for \$15.00. This consists of a switch on the rear of the machine, which selects the 2068 or SPECTRUM half of a 32K internally-installed epron.

If you send me your 2068 for this modification, I will UPS it back to you the day after I get it.

2: THE INTERFACE

This component contains the disc system BASIC command software, and handles data transfer between the 2068 and the controller.

The original ZEPER interface is no longer available. The interface I sell is a redesigned unit which includes Spectrum capability (switch-selectable) and requires no twister. Use of the spectrum capability requires that the 2068 have Spectrum emulation of some sort.

The interface measures 2" H x 4.5" W and has a 64 pin bus connector on the front and rear. The D connector for the controller cable is on the right, rather than on top as on the original. The RESET and TIMEX/SPECTRUM switches are on the left side. The interface is hand-wired and comes in a nice case. The unit is hand-wired to keep the cost down; it's very expensive to make printed-circuit boards in small quantities. It takes me about 2 hours to hand-wire a type A interface.

There are two types of interfaces available: A and B. Type A does NOT include a printer interface. Type B includes an SERCO-compatible Centronics interface. It's a bit larger than the Type A unit: 3" H x 4-1/2" W. A detachable printer cable is included.

3: THE POWER SUPPLY

The original ZEPER power supply is notoriously hot-running and troublesome, and it has NO trade in value as far as I'm concerned. I prefer to sell cool-running "switcher" power supplies. They are excellent despite their low price, but usually won't fit in a silver box. If you don't order a system cabinet, then your switcher will be provided in some sort of box, wood or metal. Most of the surplus supplies I buy are unboxed. I'm a woodworker, so I box them in wood. The boxes I make have a front-mounted switch and LED power-on indicator, and are adequately ventilated.

4: THE CONTROLLER

The controller is a special-purpose Z80 computer which controls data transfer between the 2068 and the disc drives. The controller also includes two serial RS232 ports.

A 16K controller is adequate if you do NOT want CP/M. A 64K controller is needed if you DO want CP/M. 64K controllers include a CP/M disc and CP/M documentation.

COMPONENT DESCRIPTIONS, Cont.

5: DISC DRIVES

Disc drives are, of course, the heart of the system. I use and recommend TEAC 3.5" 720K drives rather than Hitachi 3" drives, which are in very limited supply and hold very little data.

You can get by with only one drive, but I recommend two or more. You can always purchase more drives later, as needed. If you wish to transfer data from 3" to 3.5" and are unable to do so because you lack a 3" drive, you can send me your 3" discs and I'll do it for you at minimal cost. The CP/M BIOS can be modified to use 3.5" drives rather than 3" drives. Your 3.5" CP/M disc will contain the 3.5" BIOS.

6: CABINETS

There are two types of system cabinets available:

Type A is the original metal FDD3000 cabinet. I have only 3 of these as of 10-27-89. They have room for a power supply, controller and 2 drives (3" or 3.5"). This cabinet measures 15" W x 4" H x 7.5" D. Drives are horizontal.

Type B is a very pretty wood cabinet designed and constructed by yours truly. It can accommodate a power supply, controller, and up to FOUR drives (3" or 3.5" or 5.25"). This cabinet measures 13" W x 6" H x 8" D. Drives are vertical.

I will install your components in your cabinet at no charge. Your monitor can be placed on top of either cabinet.

7: SPECTRUM EMULATION

This is a very worthwhile option to have, since there is a great deal of excellent Spectrum software available. For more details, see "1: THE 2068".

8: THE PRINTER INTERFACE

If you plan to use a serial printer, then you don't need a printer interface, since you can use the controller's serial port. BUT BEWARE: many programs would need modification to work with this setup. I recommend you use an SERCO-type Centronics interface and an Epson-type printer for maximum compatibility with existing software.

I can supply an SERCO-compatible Centronics interface either as a separate unit, or built into the Type B ZEPER interface.

9: THE LINGER BOARD

This is an RS232 terminal board. It can be used with CP/M to provide an excellent 80-column monochrome display (using your composite or TTL monitor) and excellent keyboard input, using an IBM-type keyboard. I also have plans (called SYS80) to modify the TIMEX and SPECTRUM BIOS for use with this board.

The LINGER board can emulate a great many different terminals. Please write or phone first if you are interested in the LINGER option. There is room in Cabinet B for this board, but not in Cabinet A. Write for a data sheet concerning the LINGER board!

PRICE LIST/ORDER BLANK 10-28-89

Please ship ASAP to:

DATE _____

PHONE _____

REF	PRICE	QTY	TOTALS	DESCRIPTION
1	\$75.00	_____	_____	T/S 2068 Computer
2A	45.00	_____	_____	ZEBRA Interface, w. T/S switch
2B	70.00	_____	_____	" with Centronics interface
3A	10.00	_____	_____	Original ZEBRA power supply (lousy!)
3B	10.00	_____	_____	Switcher power supply, boxed, varies
4A	30.00	_____	_____	16K Controller
4B	50.00	_____	_____	64K Controller with CP/M
5A	50.00	_____	_____	ZEBRA 3" drive (SSDD40 HFD305SXA)
5B	70.00*	_____	_____	TEAC 3.5" drive (DSDD80 720K)
6A	40.00	_____	_____	ZEBRA FD3000 cabinet, 2 drives max
6B	40.00	_____	_____	Jack's wood cabinet, 4 drives max
7	15.00	_____	_____	Spectrum Emulation installation
8	40.00	_____	_____	Stand-alone Centronics I/F (see #2B)
9A	80.00	_____	_____	LINGER BOARD (kit form)
9B	120.00	_____	_____	LINGER BOARD (assambled and tested)
10	40.00*	_____	_____	IBM-type keyboard (for LINGER board)
(est)	5.00	_____	_____	Shipping and handling
		_____	_____	TOTAL ENCLOSED

*I can purchase these items for you at local computer swaps. Price shown is what you should prepay. If I can get you a bargain I will refund any excess. I will purchase only equipment that is guaranteed by the seller. The seller's invoice and address will accompany the item.

NOTE: All prices are subject to change. You will be notified of any major changes before your order is filled.

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HAPPY COMPUTING.....THE EDITORS

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PHONE: _____ WORK#: _____

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NEWSPAPER/MAGAZINE _____

MEMBER/FRIEND _____

Mini File Server BBS

Supports: 300/1200 baud at 8,N,1
Password: "fishwife"
Sysop: Steve Nichols
Phone#: (408) 253-2295

NOTE: The Mini File Server BBS has been supporting the Unix files system since it's start. It is strickly an U/D load BBS via X-modem or ASCII. For further information, please contact Bill Miller.

Netware Divisions

Supports: 300/1200/2400 baud at 7,1,E
Terminal: VT52
Sigop: Kevin Lueng
Phone#: (415) 753-5265

T S C Sig T C U

TIMEXsinclair Cambridge S.I.G.
The Computer Workshop
558 Cypress Avenue
Sunnyvale, CA 94086
(408) 739-3977

SIG Host: Mark Wahl

Meetings: Every Saturday morning at 10:00 am
Stanford University
Jordan Hall (in the Quad)
Room 388C (downstairs)

Dates: February 3, 10, 17, 24, 1990
March 3, 10, 17, 24, 31, 1990
April 7, 14, 21, 28, 1990

LogOn Unlimited Bulletin Board System TIMEXsinclair SPECIAL INTEREST GROUP (SIG)

SAN MATEO

Message base #10 - PDSE Library on Directory #50

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SIG OP: Mark Wahl

P U G

Peninsula User Group
311 Michelle Lane
Daly City, CA 94015
(415) 878-1773

Support for:
-TIMEXsinclair's
1000/1500/2068
-Cambridge 288
-Sinclair's
Spectrum +128K
and GL

President: George Mockridge
Host: Walt Johnson

Meetings: Third Sunday of each month, 1:30 pm
Peninsula Hospital
1783 El Camino Real
Burlingame, CA

TO BE ANNOUNCED
↓
IN MARCH!

Dates: February 18, 1990 April T.B.A. (EASTER)
March 18, 1990 May 20, 1990

T S S U

TIMEXsinclair Cambridge Silicon Valley Users
6675 Clifford Drive
Cupertino, CA 95014
(408) 253-3175

Host: Bill Miller

Meetings: Third Wednesday of each month - 7:00 pm
Cupertino Library
Community Room
10400 Torre Avenue
Cupertino, CA 95014
Bring your equipment
down access ramp
Leading to bottom of
circular building

Dates: February 21, 1990... 3rd Wednesday
March 27, 1990... 4th Tuesday
April 18, 1990... 3rd Wednesday
May 16, 1990... 3rd Wednesday

TMS-BAY, INC.

Tampa and Suncoast Bay Area Micro-
computer Users' Group, Inc.
5956 46th Avenue North
Saint Petersburg, FL 33709
(813) 546-4278

Hosts: Eric Best, George Featherman, Warren Reed

Meetings: Second Saturday of each month, 7:30 pm
Beach Federal Savings and Loan
7777 North Seminole Blvd.
Seminole, FL

Dates: February 10, 1990
March 10, 1990
April 14, 1990

PUG'S NEWSLETTER
EXCHANGESNUG ROUND-UP
FEBRUARY 1990

All the PRINT # commands are to be a semi-colon, or by one or more apostrophes (SYM SHIFT 7), if blank lines are wanted.

Dr. Dreger's book informs that PRINT #2;" will print to the upper screen which is the same thing that PRINT also does. The next PRINT command "PRINT #3;" will send the printing to the printer. This can be either the 2040 printer or a full size printer as long as you have the printer driver loaded and initialized.

Is there a PRINT #4;? Yes, it is used by the "ZTALKER". It is the means by which words are entered to make the "ZTALKER" talk. However, some words do not sound right if spelled properly, so you might have to mis-spell them to get the "ZTALKER" to sound right.

THE BANTOP
WINTER ISSUE 1989S.M.U.G. SELLING DIGITIZER FOR
THE TIMEXsinclair 2968!

If you ever wanted to put video pictures on your 2068, it can now be done. The SNUG group is now taking orders for digitizer boards in 2 forms. For one fully assembled, tested and shipped

right to your doorstep, the cost is only \$49.95 plus \$3.00 S/H. If you want the bare board and are electronically inclined, the cost is only \$19.95 plus \$3.00 S/H.

The price of the boards includes the hardware and software, is on cassette. The bare board also includes the schematic and parts list. Both boards have a leading edge connector and is ready for a mother board. If you want a feed through connector, like the AERCO, there is a \$5.00 extra charge for this type connector. The turnaround time for these boards will be about 6-8 weeks. Please remit the amount with each order. You can send to

Sinclair Milwaukee Users Group
P.O. Box 101
Butler, WI 53007

If you want more info, write them on this club project.

THE PLOTTER - CCATS USERS GROUP
JANUARY 1990

MORE CAMBRIDGE NEWS:

We just found out that Sir Clive Sinclair of Cambridge Computers LTD. in Great Britain, will be releasing an MS-DOS based portable computer (under 4 pounds) in early 1990. The unit will include a 3.5" drive and a choice of a 20 or 40 Mbyte hard drive. We will have to wait and see what he comes up with this time!

AMERICAN MICRO SYSTEMS
2175 ABOEN ROAD #262
SAN JOSE, CA 95121

FIRST CLASS MAIL

January 1990

Mr. Donald S. Lambert
3310 Clover Drive S.W.
Cedar Rapids, IA 52404